(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 24 December 2003 (24.12.2003)

PCT

(10) International Publication Number WO 03/106369 A1

(51) International Patent Classification⁷: C04B 28/02, 24/26, 24/38

(21) International Application Number: PCT/EP03/06132

(22) International Filing Date: 11 June 2003 (11.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 102 26 088.5 12 June 2002 (12.06.2002) DE

- (71) Applicant (for all designated States except US): ELOTEX AG [CH/CH]; Industriestrasse 17a, CH-6203 Sempach Station (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WASER, Hanspeter [CH/CH]; Sandgütsch 18, CH-6024 Hildisrieden (CH). BÜHLER, Erwin [CH/CH]; Wiesenrain, CH-6204 Sempach (CH). KOELLIKER, Robert [CH/CH]; Unterhofstrasse 14, CH-6208 Oberkirch (CH).
- (74) Agents: HAGEMANN, Heinrich et al.; Meissner, Bolte & Partner, Postfach 86 03 29, 81630 München (DE).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ADDITIVE FOR HYDRAULICALLY SETTING SYSTEMS, THE HYDRAULICALLY SETTING MIXTURES AND THE USE THEREOF

(57) Abstract: The invention relates to an additive for hydraulically setting systems based on modified polycarboxylates and water-soluble ethers of high polymeric polysaccharides, optionally containing further standard additives, characterized by a content of a) a water-soluble ether of cellulose or a cellulose-like compound with a viscosity of at least approximately 1,000 mPas, particularly at least approximately 2,000 mPas, measured as a 2% aqueous solution with a Brookfield viscosimeter at 20°C and 20 rpm and b) a polycarboxylate, whose main chain is linked by means of ester, ether, imide and/or amide groups with polyethylene oxide-containing side chains. The invention also relates to hydraulic mixtures having a content of the above additive and the use thereof. Using the additive according to the invention in hydraulically setting systems comparable and in part much better characteristics are obtained compared with casein-containing formulations, such as a rheological flow behaviour comparable to casein, but with improved water retention.



al Application No cinternati PCT/EP 03/06132

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 CO4B28/02 CO4E C04B24/26 CO4B24/38 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) CO4B IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) WPI Data, PAJ, EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to daim No. Citation of document, with indication, where appropriate, of the relevant passages Category ° 1,10 EP 1 180 535 A (WACKER CHEMIE GMBH) Α 20 February 2002 (2002-02-20) cited in the application claims 1,14,15 1,4,6,7, DE 203 04 239 U (MAXIT DEUTSCHLAND GMBH) A,P 9,13,19, 8 May 2003 (2003-05-08) page 3, line 24-28; claims 1,5 1,13,19, Α EP 1 197 480 A (FRANCAIS CIMENTS) 17 April 2002 (2002-04-17) claims 1,12 1 FR 2 714 912 A (BURGAND YVES) Α 13 July 1995 (1995-07-13) cited in the application claims 1,2,5 Patent family members are fisted in annex. Further documents are listed in the continuation of box C. X Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the investigation. "A" document defining the general state of the art which is not considered to be of particular relevance invention earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art O document referring to an oral disclosure, use, exhibition or "P", document published prior to the international filing date but... later than the priority date claimed in the art. ** '&* document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 22/10/2003 15 October 2003 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Daeleman, P

Fax: (+31-70) 340-3016



PCT/EY 03/06132

		FC1/EF 03/00132		
	ation) DOCUMENTS CONSIDERED TO BE RELEVANT			
Category °	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.	
A	EP 0 723 975 A (ELOTEX AG) 31 July 1996 (1996-07-31) page 8, column 47-49			
A	US 5 925 699 A (ELLENBERGER PETER ET AL) 20 July 1999 (1999-07-20) claims			
A	EP 0 520 413 A (JAPAN DEV & CONSTRUCTION) 30 December 1992 (1992-12-30)			
A	US 4 502 887 A (TSUDA KENJI) 5 March 1985 (1985-03-05)			

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 1180535	A	20-02-2002	DE	10040172 A1	07-03-2002
2. 210000	•••		ĀT	227756 T	15-11-2002
			DE	50100053 D1	19-12-2002
			ĒΡ	1180535 A1	20-02-2002
			ŪS	2002045684 A1	18-04-2002
DE 20304239	U	08-05-2003	DE	20304239 U1	08-05-2003
EP 1197480	A	17-04-2002	FR	2815342 A1	19-04-2002
			CA	2358679 A1	13-04-2002
			E.P.	1197480 Al.	17-04-2002
			US	2002121230 A1	05-09-2002
FR 2714912	A	13-07-1995	FR	2714912 A1	13-07-1995
EP 0723975	Α	31-07-1996	DE	19502435 A1	01-08-1996
			ΑT	179993 T	15-05-1999
			CA	2168157 A1	27-07-1996
			DE	69602384 D1	17-06-1999
			DE	69602384 T2	13-01-2000
			DK	723975 T3	15-11-1999
			EP	0723975 A1	31-07-1996
			JP	2831317 B2	02-12-1998
			JP	8239539 A	17-09-1996
			NO	960299 A	29-07-1996
			TW	432077 B	01-05-2001
			US	5959029 A	28-09-1999
US 5925699	Α	20-07-1999	CH	690303 A5	14-07-2000
			DE	19539250 A1	02-05-1996
			FR	2726264 A1	03-05-1996
			GB	2294687 A ,B	08-05-1996
			IT JP	1279226 B1 8208297 A	09-12-1997 13-08-1996
EP 0520413	Α	 30-12-1992	 JP	2635884 B2	 30-07-1997
EL 0350419	М	20-16-1336	JP	5147995 A	15-06-1993
			CN	1075471 A ,B	25-08-1993
			DE	69218302 D1	24-04-1997
			DE	69218302 T2	16-10-1997
			EP	0520413 A2	30-12-1992
			US	5352290 A	04-10-1994
			KR	196096 B1	15-06-1999
US 4502887	А	05-03-1985	JP	1833313 C	29-03-1994
	-•		JP	59131547 A	28-07-1984
•			BR	8400050 A	21-08-1984
			CA	1208243 A1	22-07-1986